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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/669,840 | 09/24/2003 | Keith R. Mowery | TI-35959 | 4422 |
| 23494 | 7590 | 10/12/2006 | EXAMINER | |
| TEXAS INSTRUMENTS INCORPORATED P O BOX 655474, M/S 3999 DALLAS, TX 75265 | | | TRAN, VINCENT HUY | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2115 | |

DATE MAILED: 10/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/669,840

Applicant(s)

MOWERY ET AL.

Examiner

Vincent T. Tran

Art Unit

2115

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 11-14 and 16-20 is/are rejected.
- 7) ☒ Claim(s) 7-10 and 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-20 are pending for examination.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-6, 11-14, 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Atkinson et al. US 20020087816 in view of Davis U.S. Patent 5,862,393.

4. As per claim 1, Atkinson et al. teach a method for improving the startup speed of a computer operating system from a suspended state to an active state [paragraph 0017, 0072], comprising:

running a computer application in the operating system to capture a predetermined message issued by the computer operating system [inherent from paragraph 0069¹];

sending a command [inherent, a command is send from the CPU 130 to the algorithm 132 of fig. 1], in response to the captured message, from the application to a device manager [132 fig. 1] to turn the power off a device [memory page] to be powered down [paragraph 0069].

powering down the computer [inherent];

¹ When Suspend or Hibernation is initiated, the algorithm 132 of fig. 1 then powers off one of the memory page. As such, there is a application operable to relate the message to the algorithm.

restarting the computer with device removed from the operating system [paragraph 0072-0074²; paragraph 0083]; and

reinstating the device after the computer has been restarted [paragraph 0072, 0083].

However, Atkinson et al. do not teach the sending a command, in response to the captured message, from the application to a device manager in the operating system to *removed a device* to be powered down, from the operating system.

Davis teaches another system for managing power consumption of a computer by communication power management events to a removable device of the computer. Specifically Davis teaches

running a computer application in the operating system to capture a predetermined message issued by the computer operating system [col. 9 lines 38-45];

sending a command, in response to the captured message, from the application to a device manager [power management module 24 fig. 2] in the operating system to remove a device to be powered down, from the operating system [fig. 4; col. 2 lines 48-65; col. 3 lines 26-37].

At the time of the invention, it would have been obvious to one of ordinary skill in the art to have modified the system of Atkinson et al. with the removal of a device from the operating system of David in response to the power down signal.

² Upon return to normal operation, the system delaying the restoration of system memory so that time and power may be save that would otherwise lost in a suspend/resume cycle; and addition, the system included a method to intercept any read or write cycles to pages of system memory that have not yet been restored. In the other word, the system resume from the suspend state with some of the memory pages still at off state (power off).

The advantages would be been to force the operating system to resume faster by not only delay the activation of the low priority memory page but also with other devices that have low priority.

5. As per claim 2, Atkinson et al. teach the predetermined message is a suspend message [502 fig. 5].

6. As per claim 3, Atkinson et al. do not teach the suspend message is WM_POWER_BROADCAST. However, Atkinson et al. teach the algorithm, in response to the suspend message, the algorithm then powers off one of the device to be powered down; therefore it would have been obvious that Atkinson et al. teach the claimed message since the special signal does not alter the fundamental operation of the Atkinson et al. system.

7. As per claim 4, Davis teaches the power manager and not the plug and play manager is responsible for remove the device be powered down. However, at the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to modified the manager of Davis with the plug and play manager because applicant has not disclosed that plug and play manager provides an advantage, it used to a particular purpose, or solves a stated problem. One of ordinary skill in the art, further more, would have expected applicant's invention to perform equally well with either the manager of Davis or of the applicant because both operable to remove the device from the system.

8. As per claim 5, see discussion in claim 4.
9. As per claim 6, see discussion in claim 4.
10. As per claim 11, it is noted that the limitation do not substantially differ from claim 1, with the exception for the limitation reciting running a computer “stack filter driver” to capture a predetermined message. As demonstrated previously, the combination of Atkinson et al. and Davis anticipated the limitation in claim 1.

In regard to the limitation stack filter driver, the system of Atkinson et al. modified by Davis does not disclose the running of a computer device stack filter driver to capture a predetermined message issued by the computer operation system. However, Davis teaches running an application to detect the message issued by the operating system. Therefore, the system of Davis includes the claimed running the filter driver which is well know in the art of computer system wherein the filter driver is usually positioned between the operating system and other controllers operable to intercepting communication between the operating system and other controller in the system.

11. As per claim 12, see discussion in claim 2.
12. As per claim 13, see discussion in claim 3.
13. As per claim 11, see discussion in claim 4.
14. As per claim 16, Atkinson et al. teach a computer having improved startup speed from a suspend state to an active state comprising:

a microprocessor [130 fig. 1] being controller by an operating system;
an application stored in a memory of the computer for running within the operating system to capture a predetermined message issued by the operating system [inherent³], the application sending a command, in response to the captured message to a algorithm within the operating system [paragraph 0086] to power off a device to be powered down [paragraph 0069];
means for powering down the computer system [inherent];
means for restarting the computer with the device power off [paragraph 0072]; and
means for reinstating the device after the computer has been restarted [paragraph 0072-0074].

Atkinson et al. do not teach expressly the removal of a device to be powered down from the operating system and reinstating the device after the computer has been started.

Davis teaches another system for managing power consumption of a computer by communication power management events to a removable device of the computer. Specifically Davis teaches

in response to the predetermined message issued by the operating system, the power management module remove a device to be powered down, form the operating system [fig. 4];
means for reinstating the device in the operating system [fig. 5; col. 10 lines 1-20].

At the time of the invention, it would have been obvious to one of ordinary skill in the art to have modified the system of Atkinson et al. with the removal of a device from the operating system of David in response to the power down signal.

³ see footnote 1.

The advantages would be been to force the operating system to resume faster by not only delay the activation of the low priority memory page but also with other devices that have low priority.

- 15. As per claim 17, see discussion in claim 2.
- 16. As per claim 18, see discussion in claim 3.
- 17. As per claim 19, see discussion in claim 24.
- 18. As per claim 20, the system of Atkinson et al. modified by Davis teach the computer having improved startup speed fro a suspended state to an active state. Therefore, Atkinson et al./Davis teach a computer program stored on computer readable media to operate the computer.

Allowable Subject Matter

- 19. Claims 7-10, 15 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vincent T. Tran whose telephone number is (571) 272-7210. The examiner can normally be reached on 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas c. Lee can be reached on (571)272-3667. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Vincent Tran.



CHUN CAO
PRIMARY EXAMINER

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20051130

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner for Patents

The Office Action mailed on 12/23/2005 is defective in that it mark as "mail returned to USPTO as undelivered" on 1/03/2006 although, as indicated by applicant, the mailing address is correct. Accordingly, please remail the attach Office Action with new due date.